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UNDERSTANDING ACCESS TO ESSENTIAL PHARMACEUTICALS DURING A PUBLIC HEALTH CRISIS

by

ANDREW ROGER JESSEN

Under the direction of Jennifer L. McCoy

ABSTRACT

Despite the benefits of antiretroviral therapy in treating HIV/AIDS, government responses have varied substantially, from provisions guaranteeing nearly universal access to insufficient provisions providing almost no access. This research seeks to specifically examine primary explanations, such as economic capacity, and emerging explanations, such as the role of electoral accountability and the presence of stigma, and the coordination between the epistemic community and political leadership as potential causes for the variance in the government provision. By controlling for state economic capacity, this research furthers the importance of examining other explanations for state response in light of a public health crisis. While electoral accountability and the role of stigma had marginal impacts, the level of scientific coordination and understanding among the states political leadership had perceptible impacts. This research also tests broader aspects of the political economy such as the role of state capacity and subsequent government crisis response.

INDEX WORDS: Human Immunodeficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS), Latin America, Honduras, Nicaragua, Chile, Colombia, government response, state capacity, role of electoral accountability and stigma, coordination and understanding among political leadership and epistemic communities, international public health, antiretroviral therapy, essential pharmaceuticals.

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Masters of Arts

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LIST OF ABBREVIATIONS

AIDS (Acquired Immune Deficiency Syndrome)

ALCA (Free Trade Area of America)

APC (Alliance for Chile Party)

AUGE (Universal Access to Explicit Guarantees Plan)

CONASIDA (Chilean National AIDS Commission)

FAO (Food and Agriculture Organization of the United Nations)

FARC (Revolutionary Armed Forces of Colombia)

FSLN (Sandinista National Liberation Front)

HAART (Highly Active Antiretroviral Therapy)

HIV (Human Immunodeficiency Virus)

LCLLS (Colombian Anti-AIDS League)

NGO (nongovernmental organization)

PAHO (Pan American Health Organization)

PDC (Christian Democrat Party)

PLC (Liberal Constitution Party)

PLH (Liberal Party of Honduras)

PNH (National Party of Honduras)

PLWHA (People Living With HIV/AIDS)

UN (United Nations)

UNAIDS (Joint United Nations Programme on HIV/AIDS)

WHO (World Health Organization)

1. INTRODUCTION

Despite positive technological developments in treatment and prevention, the global prevalence of the Human Immunodeficiency Virus (HIV) rose to its highest level in 2004 at an estimated 39.4 million (UNAIDS 2004). In Latin America specifically, about 1.7 million people are currently living with HIV, of which 240,000 were recently infected. In 2004, about 95,000 died in Latin America due to direct complications of HIV/AIDS. Besides this increased level of mortality, studies have shown this epidemic as severely impacting the labor supply and the productivity of national economies, fostering inequality and poverty especially among women and the youth, and reducing the political legitimacy, efficacy of the government, and military security of the nation (Haacker 2004; Summers, Kates, Murphy 2002; FAO 2001, Petagatienan and Blibolo 2002; Dixon, McDonald, and Roberts 2002; Nelufule 2004; Ostergard 2002; Schneider and Moodie 2002).

When HIV/AIDS emerged in the early 1980s, few viable treatment and therapy options existed to prolong life or improve living standards. In 1993, nearly a decade after the emergence of HIV/AIDS, only three anti-HIV drugs had made it successfully to market (Cohen 2002). These pharmaceuticals provided marginal benefits at best, prolonging the life of the infected individual but not improving the quality of their life. In Latin America, the prevalence of AIDS increased throughout all existing population groups (Stanecki and Way 1996).

This seemingly futile quest changed in 1996 when researchers discovered that a specific regimen of pharmaceuticals known as highly active antiretroviral therapy or HAART, had the

capability to dramatically curb the level of HIV in the blood, prevent further immune damage, and prevent the transmission of mother to child (Piot 1996). Some countries using this therapy, such as Brazil, have reduced their HIV-related mortality by 50 percent since 1996, while others studies have shown an increase in mortality, often attributed to late treatment regimes (Attawell, Mundy 2003). This antiretroviral therapy has also reduced the risk of tuberculosis in developing nations (Attawell, Mundy 2003:2). Initially, this therapy cost about \$15,000 for a year's treatment regimen per individual. However, Indian companies quickly duplicated this molecule and began selling a generic regimen for a fraction of the initial price. In 2003 with manufacture in Brazil, India, and Thailand, these annual expenses dropped to \$675 and under \$300 for brand and generic name regimens respectively (Attawell).

While this therapy and the deteriorating health conditions suggested a promising future for infected countries, the response in Latin America varied substantially, from provisions guaranteeing nearly universal access to insufficient provisions providing almost no access. For instance, the Brazilian government has provided access to 90% of its infected patients, while countries such as Nicaragua and Peru have provided at best minimal coverage (Abreu, Noguera, and Cowgill 2003).

Table 1: Percentage of Antiretroviral Therapy Coverage

	2002	2003	2004
Argentina	100	100	90
Bolivia	6		19
Brazil		100	86
Chile	91	100	100
Colombia	35		47
Ecuador	65		34
El Salvador		30	32
Guatemala		23	30
Honduras	4	18	30
Mexico		100	74
Nicaragua	0	2	4
Peru	15		18
Uruguay		90	100

Sources: PAHO 2002; WHO Coverage 2003; WHO Initiative Report 2004

Typically, the presence of intellectual property and the costs of antiretroviral provision have been blamed for this variance. The imposition of patents has allowed firms in developed

states a commercial incentive for the substantial investment and the production of a finished product that may be easily duplicated. As noted earlier, the relaxing of these intellectual property conditions (patents) in developing states and the subsequent donations by international institutions have reduced substantially the cost of the antiretroviral therapy. Despite this reduction, economic capacity and international patents remain the primary blame for the low public health provision in antiretroviral therapy. This variance between perceptions and reality suggest that other factors impact the provision of antiretroviral therapy. For example, electoral accountability and the role of scientific understanding certainly impact the level of government policy regarding its provision of antiretroviral therapy.

This research seeks to specifically examine these explanations as potential causes for the variance in the government provision of antiretrovirals among Latin American countries. Each theory economic capacity, electoral accountability and the presence of stigma, and coordination between the epistemic community and political leadership has potential explanatory value. Questions raised include: “If structural issues such as economic capacity explain the variance, how might one explain the variance among states with similar resources, but varying actions? How might the presence and nature of democracies in Latin America affect this government provision of pharmaceuticals? Finally, how might understanding of the HIV/AIDS crisis affect a government’s response?”

2. LITERATURE REVIEW

Three distinct theories in comparative political economy present themselves as potential explanations for the variance in the government provision of antiretrovirals. In brief, the first suggests that the government lacks the economic capacity to purchase the antiretrovirals or to provide the necessary infrastructure for their production and/or management. Instead of resource constraints and system capacity, the second theory suggests that in democracies, the presence of stigma and the marginalization surrounding HIV/AIDS may play a role in this variation. Finally, the third theory suggests that a knowledge disconnect exists between the epistemic community and the government officials. In this case, variance in knowledge among the political leadership about HIV/AIDS and its treatment and prevention options may play a role.

a. State Capacity and Economic Limitations

The first theory concerns the state's capacity to mobilize its internal resources to mitigate the effects of infectious diseases upon its citizens. According to Theda Skocpol, state capacity includes sovereign integrity, financial resources, skilled bureaucracy, and the institutional mechanism to utilize these resources (Skocpol 1985:3-13). Andrew Price-Smith, building upon this definition and Thomas Homer-Dixon's earlier argument about capability, defines state capacity as the ability of a country to maximize both wealth and stability, to wield sovereign control and to protect this territory from predatory forces, and to adjust to both internal and external crises (Price-Smith 2002: 25).

Naturally, the initial position of this state capacity determines the timing and commitment of any adaptation to a crisis. According to Price-Smith, "states with higher initial capacity" will wield greater financial resources to react to impending crises. Finally, one must recognize that intervening variables alter the position of the state capacity. For instance, both internal variables

such as civil war or significant environmental damage, external variables such as the swift introduction and hasty introduction of international capital affect state capacity to respond to internal crises.

In the case of HIV/AIDS, this theory suggests that the state either lacks either the economic capacity to purchase the antiretrovirals or the state capacity to provide the necessary infrastructure for their management (Morrison 2002; Nkengasong 2002; Bate and Tren 2004; HIV International AIDS Conference 2004). For instance, Morrison identifies key challenges including the necessity to expand health system capacity as well as the cost of integrating prevention and treatment activities (Morrison 2002).

Furthermore, the complexity of regimens combined with the scarcity of health care providers directly impacts the government capacity to utilize any antiretroviral treatment effectively (Grubb, Perriens, Schwartlander 2003). Essentially, limited health service infrastructure limits the capacity of certain states in implementing the complex program of antiretroviral therapy for any large scale demand (Attawell, and Mundy 2003). For instance, in Malawi, studies suggest that the advancement of the antiretroviral treatment has slowed due to the additional workload as well as the direct impact upon non antiretroviral patients (IRINNews 2003). Other authors noting the limited human resource infrastructure argue that countries such as China struggle with providing access to antiretroviral therapy due to insignificant numbers of doctors with appropriate training and skills (Sui 2003; Attawell 2003).

Finally, many have suggested the possibility of an emergence of potential drug resistant strains of HIV due to in-appropriate prescriptions, and interruptions in drug supply and adherence (Irwin, Millen, Fallows 2003: 88; Morrison 2002; Chequer et. al 534). Several studies including a 2003 World Bank study indicate that high adherence tendencies suggests that this emergence is unlikely (Attawell 2003; Chequer 2002). Finally, related factors increasing the

price of the antiretrovirals and thereby diminishing state capacity include exorbitant transportation, storage and monitoring costs (Irwin, Millen, Fallows 2003:75).

b. Electoral Accountability: Role of Stigma and Marginalization

The second theory bridges classical democratic norms with the level of marginalization caused by the HIV/AIDS epidemic. Liberal democratic theory has held that there exists a bond between the government and the governed (Downs 1957; Schmidt 2002, 167). This bond, or vote, allows the democratic constituency to choose participants in their government. In the case of free and fair elections, political participation, and civil liberties surrounding these elections, this decision ultimately yields political legitimacy, accountability, and responsiveness to citizen demands (Diamond, Hartlyn, Linz, and Lipset 1999; Diamond 2002). While there exists discontent in the efficacy of democracy in Latin America, studies have shown that Latin Americans fundamentally perceive the right to vote and democracy as the only legitimate form of government (Lagos 2002; Lagos 2003; UNDP 2004).

Due to the significance of the selection process (through voting), the level and the extent of participation among and across affected groups surely has significance. In the case of infectious diseases, the evidence indicates that societies have historically stigmatized the infected population, reducing their capacity to mobilize general support and adopt appropriate remedies (Rushing 1996, 163-180). This stigmatization characterizes the victim as both a deviant, and responsible for their own situation due to perceptions of their engagement in illicit, such as drug use or prostitution, or “immoral behavior”, such as homosexuality (Khuat, Nguyen, Ogden. 2004; Nyblade et al 2003). Typically, this stigmatization diminishes the voice of this affected population. However, theory suggests that eventually this marginalization will reverse itself when this proportion of the infected population increases to a certain level (Milner 1997: 34-36).

In other words, there exists a tipping point when this population loses its marginal status and gains a mainstream status.

When the political leadership of the state must secure support (and the vote) from this infected population, they will be more likely to promote methods, such as the provision of pharmaceuticals, that will secure this support. Naturally, this theory assumes the political leadership seeks to maximize its utility, or seek reelection. Downs deems this behavior an “office-seeking” motivation (Downs 1957) and ultimately assumes that policy choices depend upon reelection considerations rather than their appropriateness in the respective situation.

In sum, democratic theory suggests that democracies retain their support through participation in elections. Initially, participants (the infected population) suffering though stigma and discrimination will be less likely to gather suitable momentum. However, as their relative percentage increases in the democracy, theory would insist a reversal in the balance of power. This reversal in turn would ensure measures such as the provision of pharmaceuticals by the political leadership in order to gain their support in the electoral process.

c. Coordination between Epistemic Community and the Political Leadership

The third theory proposes that under complex issues, such as the assessment of science and technology, there exists varying levels of coordination between the epistemic community and the political leadership of the country. Naturally, this knowledge, in turn, will impact the provision of pharmaceuticals by states. Before exploring this disconnect, one should briefly visit the state and its use of uncertain scientific information and research. First, national governments have historically bound scientific and technological enterprises with the interest of the state (Skolnikoff 1993, 27; Durbin 1980; Clarke 1985; Bridgstock et al 1998:7-13; Bhalla and James 1988). For example, after World War II many developed states accelerated their funding of scientific research, often in order to remain sufficiently advanced in terms of weapons

capabilities. Ultimately, states have either propelled innovation and its subsequent technology through the promotion of research and development and related national programs, or acquired the technology from exterior sources through sharing, purchase, or espionage (Bhalla and James 1988:301-302). Through the years, spending on science grew to a point of doubling every fifteen years (Bridgestock 1998: 9).

Unfortunately, politicians do not always recognize or realize that “their understanding of complex issues and linkages (such as advanced technology) is limited” and that a crisis or shock is necessary “to overcome the institutional inertia and habit” and bring about actual reform by seeking the assistance of the epistemic and scientific community (Haas 1992:14; Von Schomberg 1993: 7). This epistemic community, often comprised of scientists and international agents, both focuses on knowledge production and application, and shares a normative commitment to a certain causal model (Haas 1991: 40-41). According to theory, this community can provide four valuable functions including: 1) provision of advice into cause and effect relationships, 2) clarification of complex “interlinkages”, 3) help defining the state’s interest, and 4) help shaping potential policies (Haas 1992: 15). Similarly, Schomberg notes that the political elite often assume a functional belief or trust in the reliability and production of advanced technological information.

At other times, these politicians have chosen to ignore or misrepresent the findings of the respective scientific community. For example, these politicians may be “skeptical about the value of technological progress,... or (may) mistrust authority in bureaucracies responsible for technological change” (Nelkin 1977: 12). Haas similarly notes that under crisis conditions, procession of information was “at best incremental and that decision makers tended to apply simplified images of reality which were highly resistant to modification (Haas 1992: 28). In the scientific community, an earlier survey reveals that only a fraction (18%) believe that science

serves as a principal determinant of scientific truth, while a substantial amount (72%) believe that the “society's political system, including the values and beliefs of its citizens stands as the principal determinant” of scientific truth (Cole 1983: 87). Cole attributes this shift in the universality in the belief in science and technology to the publication of Thomas Kuhn's “The Structure of Scientific Revolution.”

In relating to access to pharmaceuticals, this theory denies the neoclassical assumptions that economic sanctions solely prevented the technological diffusion and the use of pharmaceuticals. For example, according to the literature and specifically to Sell, “weak states can resist external threats even at substantial costs to themselves” (Sell 1995: 316). These weak states can reject the “value creation” of the advanced state (Sell 1995: 316) and withstand pressure in the face of a crisis. Proponents of this theory often cite as evidence the case of South Africa and its level of provision of antiretroviral therapy in the face of its HIV/AIDS crisis.

Before the discovery of HAART, South Africa had no concrete solutions for halting the advance of the HIV/AIDS virus. In 1997, South Africa passed the Medicines and Related Substances Control Amendment Act of 1997 (hereafter called the Medicine Act). In short, the Medicine Act propelled two provisions, 1) the capacity to use generic substitution and 2) the capacity to prescribe generic substitutes. Specifically, under Sect 15(2), this act declared that the South African Health Minister could “compel a particular drug’s patent holder to license another company to produce its drugs, if that can be done cheaper than buying them from the patent holder” (quoted in Bass 2002). While the legislature passed the Medicine Act, Thabo Mbeki, the president of South Africa, openly questioned and doubted the link between HIV and AIDS.

Forty one pharmaceutical firms filed a law suit against the South Africa Government in February of 1998. According to these actors, the suit’s intent was to halt the “uncontrolled importation of manufactured and cut-price versions of patents in AIDS drugs (Collins 2001,

176). At the time of lawsuit filing, South Africa political officials had not transformed the law from idea into actual implementation. After the subsequent international moral outrage, these pharmaceutical companies suspended the suit against South Africa, offering them reduced price pharmaceuticals (Lueck 1999). The South African government rejected this offer.

On April 19, 2001, the advanced countries and the international pharmaceutical industry dropped its litigation altogether against South Africa (Block & Gardiner 2001). Immediately, South Africa announced its own uncertainty on whether it still wanted to break the international pharmaceutical patent and develop the generic antiretroviral pharmaceuticals. Following this announcement, the international community criticized South Africa and its political leadership for its failure to accept the findings and conclusions of the epistemic community.

In sum, this theory suggests that the level of knowledge transfer between the epistemic community and the political leadership of states affects the level of uncertain technology usage, such as the provision of pharmaceuticals. Political leadership that accepts an international consensus will be more likely to adopt this technology. As was seen in the case of South Africa, political leadership without this acceptance will be less likely to adopt this technology.

3. HYPOTHESES

Based upon the literature review, three hypotheses have presented themselves. Naturally, the null hypothesis for each explanation would indicate that no statistical relationship exists between the proposed independent variable and the dependent variable.

a. Hypothesis_a

States will provide antiretroviral treatment (through the purchase of generics or originals) to their infected population, at a level corresponding to effective state capacity (financial, economic, and health infrastructure).

b. Hypothesis_b

The larger the proportion of people living with HIV/AIDS in a democracy, the greater will be the voting impact upon policy makers. The level of this impact will be reflected in a proportionately, greater level of antiretroviral provision among those HIV/AIDS patients that need it. Similarly, the smaller the proportion of people living with HIV/AIDS in a democracy, the smaller will be the voting impact upon policy makers. Without this impact, these policy makers will be less likely to increase the level of antiretroviral provision among its HIV/AIDS patients.

c. Hypothesis_c

States and policy makers with an understanding of HIV/AIDS and/or the benefits of antiretrovirals will demonstrate this knowledge through accuracy and certainty in their public statements and government publications. For example, policy makers with greater awareness will form and support AIDS related commissions. Ultimately, as awareness of HIV/AIDS among policy makers increases, the political leadership will be more inclined to provide antiretroviral

therapy to its infected HIV/AIDS population. Potential examples of demonstrating this awareness include undertaking proactive actions such as officially recognizing the extent of the epidemic, supporting both prevention and treatment programs of HIV/AIDS through legislation, negotiation, and action, and rectifying past mistakes.

4. CASE SELECTION AND MEASUREMENT

The case analysis employs a most similar systems design. Cases were selected where many variables, such as time (2002-2004), and geographic region (Latin American countries) can be held constant for the purpose of isolating the causes of dependent variable changes (Lijphart 1971, 687; Peters 1998, 2). Cases were also selected based upon a control of the first hypothesis (State Capacity and Economic Limitations). This study initially measured and compared across time (2002-2004) many Latin American democracies including: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Peru, and Uruguay. This broad selection of Latin American countries increased the possibility for significant generalizations and conclusions later.

To uncover the relationship between these three independent variables and the dependent variable, the government provision of antiretrovirals, data collected is specific to each independent variable and the dependent variable. Furthermore, the first hypothesis served as a control to separate the countries into a paired case study design. In order to formulate this control, the researcher compiled an index of state capacity and economic limitations. This index included three factors: health expenditures (public + private) per capita, gross domestic product per capita, and the number of physicians in country. Each factor was indexed, using developed nations' data as the baseline.¹ This data was drawn from the World Bank's Development Indicators.

After computing the control index data, the researcher determined the most appropriate comparison cases. The researcher compared states with low relative capacity and little action with states with low capacity and unexpectedly high levels in their treatment and therapy of

¹ The usage of developed countries as the baseline prevented the possibility of an absolute low and high capacity paired case study design. Instead as will be seen, the country index data separated case pairs into low and medium capacity states.

HIV/AIDS patients. Similarly, the researcher intends to compare states and higher relative capacity with little action with states with higher relative capacity and expected (positive) direction of their treatment and therapy of HIV/AIDS patients.

After calculating this control, and to measure the second hypothesis, demographic data was collected and analyzed from the World Health Organization (who.int), Pan American Health Organization (paho.org), Joint United Nations Programme on HIV/AIDS (unaids.org) and each specific country's Ministry of Health or related agency such as the National Program for the Control of AIDS. This infected population was then divided by the total population (taken from the United Nations Population Fund statistics) to generate a descriptive ratio. This descriptive ratio (percentage of infected to total population) is then be compared with the dependent variable.² In order to make generalizations, these descriptive ratios were then compared both temporally during the measured interval and spatially among sample countries.

In order to test the third independent variable, this research determines the knowledge of the political elite about HIV/AIDS and/or the benefits of antiretrovirals. Database searches of local and foreign newspapers (Lexis Nexis, Factiva, and Proquest) as well as the World News Connection (the successor to the Foreign Broadcast Information Service) allowed the researcher to collect both the political elites' public statements and acknowledgements of the government policy (such as establishment and funding of HIV/AIDS related commissions) at the time. This data, in turn, was then compared with the international scientific consensus at the time of the measurement. The researcher used qualitative case assessments to analyze each specific country.

Finally, as each of the independent variables was compared with the dependent variable, the percentage of the government provision of antiretrovirals, one should define this variable. This dependent variable came from either the country's National AIDS Control Program or local

² Due to an absence of data across all countries, this measurement serves as a preliminary step in the impact of stigmatization and the provision of antiretrovirals. As international health monitoring improves, the interested community can narrow this hypothesis from a macro-perspective to a micro-perspective.

Pan American Health Organization resources.³ Unless noted, this data usually included international donations of antiretrovirals as falling under the government provision of antiretrovirals.

³ For the dependent variable data (variance in the provision of antiretroviral therapy), see the Appendix, Table 1.

5. A DISCUSSION OF LIMITATIONS

Several limitations arose in this research design and its implementation. First, the large sample size, across time and space, lacked complete data. The researcher's original intent to measure a larger cross sample was not possible. Instead, the researcher narrowed the research to 2002-2004 to begin the process of describing the provision of antiretrovirals among the selected states. Similarly, language constraints limited the researcher in the selection of cases to English and/or Spanish speaking countries. This limitation, removed notable cases, such as Brazil, due to the usage of Portuguese by the Brazilian government and media.

6. COUNTRY DATA

After computing the control index, four countries (Honduras, Nicaragua, Chile, and Colombia) appear suitable for comparison purposes.⁴ While two low capacity states (Honduras and Nicaragua) have similar state capacity indexes in 2002 (9.21 and 9.23 respectively), they respond differently in their treatment of people living with HIV/AIDS (PLWHA) and specifically their provision of antiretroviral therapy.⁵ For example, Honduras improves its antiretroviral provision from 4% to 30% at the close of 2004, while Nicaragua increases its antiretroviral provision only marginally from 0% to 4%. Similarly, while two medium capacity states (Chile and Colombia) have similar state capacity indexes in 2002 (19.37 and 16.15), they too differ

Table 2: Composite H1 Index (2002-2004)

Country	2002	2003	2004	Average
Argentina	37.46%	37.96%	38.82%	38.08%
Bolivia	8.48%	8.47%	8.56%	8.51%
Brazil	25.02%	24.92%	25.26%	25.07%
Chile	19.37%	18.85%	19.13%	19.12%
Colombia	16.15%	16.17%	16.35%	16.22%
Ecuador	15.82%	15.81%	16.05%	15.89%
El Salvador	15.97%	15.92%	16.03%	15.97%
Guatemala	11.10%	11.06%	11.13%	11.10%
High income	100.00%	100.00%	100.00%	100.00%
Honduras	9.21%	9.21%	9.32%	9.25%
Mexico	24.84%	24.71%	26.87%	25.47%
Nicaragua	9.23%	16.21%	16.43%	13.96%
Peru	14.01%	14.03%	14.21%	14.08%
Uruguay	42.90%	42.89%	43.97%	43.25%

in their treatment of PLWHA in their respective country.⁶ For example, Chile's provision of antiretroviral therapy improves from a high 91% to 100% at the close of 2004, while Colombia's provision improves from only a medium 35% to 47% during the same period. Why do Chile and Colombia, states with relatively similar state capacity, react so differently in their provision of antiretroviral therapy? With these variances in mind, the following discussion will introduce each respective country and relevant historical events related to the HIV/AIDS crisis. It will then

⁴ To see the varying degrees of antiretroviral provision, see the Appendix, Table 1.

⁵ To see a graphical representation of the states as ordered pairs, see Table 3 in the Appendix.

⁶ As was noted earlier, the use of developed countries in the computation of the index and the absence of developed countries in the sample prevented a true high-low comparison across states. Instead, the researcher separated the countries into low and medium capacity and compared their responses accordingly.

test the previously mentioned hypotheses, and will seek to provide a path for discussion in the analysis.

a. Honduras

In 1984, Honduran authorities recognized the first case and subsequent death due to HIV/AIDS in a female prostitute. Five years later, in September 1989, these authorities had documented 334 cases of AIDS (Beach R, et. Al). The number of people living with HIV/AIDS (PLWHA) in Honduras continued to swell. By 1992, the Pan American Health Organization projected the number of PLWHA in Honduras had ballooned to 50,000 with 2,187 officially reported cases of AIDS (Luxner 1992:A1). Essentially, with 20 percent of Central America's population, Honduras accounted for 60% of the AIDS patients (Wilkinson 1993:1). Initial data suggested the HIV/AIDS primary impact upon two cities, Tegucigalpa and San Pedro Sula, and certain occupations, including factory and personal service workers, traders, and agricultural workers were particularly affected (Mario 1993). Experts, at the time, expected this population to swell to a staggering level of between 93,000-107,000 in 1995, and 151,000-230,000 by 2000 (Nunez 1993).

By 1996, 995 Hondurans had died due to complications of the HIV/AIDS Virus (Winslow 1996: 17). While Honduran health authorities suggested that the number officially infected was 7300, external health experts assumed a much higher percentage in their calculations of the epidemiology of HIV/AIDS in Honduras. These experts believed that the number of PLWHA in Honduras could climb to 90,000 when all the infected population is accounted for and asked that Honduras recognize the national threat to their country (Quintanilla 1996: 7A). Furthermore, AIDS workers criticized the government for its lack of a national program, indicating that the responsibility often falls upon poorly equipped volunteers (Farah 1997: A12). As a response, the Honduran government soon initiated a campaign of prevention

and the use of condoms. Conservative groups and the Catholic Church criticized this effort, and instead suggested fidelity and abstinence would curtail the epidemic (La Prensa 1997: 16).

In January 1998, Carlos Roberto Flores of the Liberal Party of Honduras (PLH)⁷ was inaugurated as Honduras's president. His margin of victory over the National Party's (PNH)⁸ candidate Nora Gunera de Melgar was 10% and he became Honduras's fifth democratically elected President since the restoration of free elections. Later in 1998, the Joint U.N. Program on AIDS (UNAIDS) launched a pilot program to provide antiretroviral therapy to 30,000 HIV-positive women in eleven pilot countries, including Honduras (Capdevila 1998: 1). UNAIDS indicated that besides infrastructure, Honduras had the political will and understanding to implement the program nationally. Besides the launch of this antiretroviral initiative, the Honduran Ministry of Health began a program, entitled "The Community Project and Social Mobilization of Juvenile Adolescents in the fight against AIDS" in 1999⁹. According to Carlos Bennaton, Regional Health Director, the Honduran authorities began to promote faithfulness and abstinence as means to "avoid the contagion" (Agence France-Presse 1999). This promotion came despite their earlier attempts at condom promotion and in light of criticism from the Catholic Church in Honduras.

In 2001, in a U.N. negotiation concerning the further implementation of antiretroviral therapy, Honduran non governmental organizations and activists were excluded from participating by the Honduran government (Agence France Presse 2001_a Agence France Presse 2001_b). In the same year, Honduran officials petitioned to become the Central American center for vaccine research (Agence France Presse 2001_c; Efe News Services 2001_a).

In November of 2001, following the September 11 terrorist attacks and in front of the United Nations, Honduras's Secretary of State, Roberto Flores Bermudez, indicated that AIDS,

⁷ Partido Liberal de Honduras (PLH)

⁸ Partido Nacional de Honduras (PNH)

⁹ "Proyecto Comunitario y Movilacion Social Juvenil-Adolescente en la Lucha Contra el sida"

poverty, and illiteracy threaten the peace as much as terrorism (Efe News Services 2001_b). In late November 2001, Honduras held presidential and parliamentary elections. In these elections the PNH candidate, Ricardo Maduro Joest, defeated the PLH candidate, Rafael Pineda Ponce. The later on inauguration of Maduro in January 2002 was the third successful transfer of power between Honduras's political parties (Taylor Robinson 2003).

By the end of 2001, the United Nations expected 12,000 Honduran children to become orphans annually, losing their parents to the HIV/AIDS virus (El Mundo 2001: 3). At the time, the Honduran government approved a national budget with the inclusion of three million lempiras (\$192,000) for antiretroviral treatment for their estimated 63,000 HIV/AIDS carriers (Agence France Press 2001_d; Efe News Services 2001_c). Vice-minister Rocio Tabora designated the emergency funds for 900 patients in public hospitals as “the problem of AIDS in our country is serious” (Agence France Presse 2002_a).

As 2002 started, HIV/AIDS had caused 30,000 deaths in Honduras since the first in 1985 (Agence France Presse 2002_a). In February 2002, the Vice President Armida de Lopez and the Minister of Health, Elmer Lizardo, announced the future construction of the regional center (known later as the National AIDS Forum) to investigate and prevent AIDS in Central America (Efe News Services 2002_a; Agence France Presse 2002_b). In their announcement, they stated that “treatment for AIDS should climb to all levels” and Honduras would equip it with necessary technology to look for a vaccine and other scientific work. In March, U.N. Secretary General Kofi Annan participated with Honduran president Ricardo Maduro in the inauguration of the National AIDS Forum (Agence France Presse 2002_c; Efe News Services 2002_b; Agence France Presse 2002_d). In describing the Forum, Maduro depicted it as a “new instance in our war against AIDS” (Agence France Presse 2002_e). At the same meetings, the Honduran Minister of Health

expressed his concern over the economic and social devastation that the epidemic was causing (Efe News Services 2002_c).

In the spring of 2002, a high court in Honduras ordered the Honduran Federal Government to pay 741,000 dollars to a patient who contracted the HIV/AIDS virus after a blood transfusion while at a state hospital (Deutsche Presse Agentur 2002; Agence France Presse 2002_f)¹⁰. Around the same time, four European countries announced their willingness to collaborate with Central American countries including Honduras (Agence France 2002_g). In May of 2002, the World Bank announced a credit of \$27 million for Honduras to allow the Honduran poor more access to treatment (Efe News Services 2002_d).

By the summer of 2002, Honduran officials estimated that about 60,000 Hondurans (about 1% of the population) were infected, with 13,000 officially recognized (Agence France 2002_h). In related announcements, the nongovernmental organization PASCA estimated that 60 percent of young adult deaths in 2010 will be attributed to AIDS (Nunez et al 2002). In announcing this data, the Honduran government sustained criticism from local organizations within Honduras. Allan Dunaway, president of the National Association of People living with AIDS in Honduras¹¹, in noting the temporary nature of many campaigns, blamed the Catholic Church's influence and its promotion of abstinence campaigns on the ineffectiveness of enforcing certain legislation.

In September of 2002, Honduras's first lady attended a summit in Mexico focusing on poverty, and related issues like AIDS, in Latin America (Agence France Presse 2002_j). This summit was followed by another in November of 2002, this time held in Honduras. This international meeting concerned the establishment of the Free Trade Area in the Americas¹², its effect upon access to treatment and medicine, and the impact of intellectual property

¹⁰The Honduran government eventually agreed with this assessment and paid this indemnity in January 2003.

¹¹ (la Asociación Nacional de Personas Viviendo con Sida en Honduras)

¹² "el Área de Libre Comercio de las Americas (ALCA)

enforcement upon public health (Agence France Presse 2002_k). Several organizations suggested that this agreement and the intellectual property enforcement would reduce Honduras's ability to utilize generic antiretroviral treatment (Agence France Press 2002_l).

By late November, the United Nations has acknowledged treatment progress, but also suggested that the AIDS epidemic in Latin America could reach the rate of Sub-Saharan Africa (Agence France Presse 2002_i). Immediately following this report, the Honduran government announced two new national strategies, "Against Stigma and Discrimination...Live and Let Live"¹³ and the "National Strategic Plan in the Fight Against AIDS"¹⁴ concentrating on youth education in prevention and the treatment of the already infected Honduran population, a majority of whom are in the economically active period (Agence France Presse 2002_m; Efe News Services 2002_f). The Catholic Church followed this report with statements indicating the inadequacy of prevention regimens utilizing condoms, but also supporting the development of a medicine bank within the Catholic Church (Agence France Presse 2002_m).

In December 2002, the United Nations approved a donation of \$41 million for the fight of AIDS and other diseases within Honduras (Agence France Presse 2002_n). In accepting the grant, Honduran president, Maduro, noted that "I am sure that together we are going to conquer this disease." In late 2002, the Honduran commission revealed that few Honduran youth receive any sex education and that 30% of the infected are between 14 and 24. The Honduran Congress also expressed their hope in a law allowing the creation of the National AIDS Commission.¹⁵ At the close of 2002, approximately 60,000 of 6,700,000 Hondurans, or .90% of its citizens were

¹³ "Contra el estigma y la discriminación...vive y deja vivir."

¹⁴ "Plan estratégico Nacional de Lucha contra el SIDA"

¹⁵ La Comisión Nacional del sida

infected with the HIV/AIDS virus (UNFPA 2002). Of those PLWHA in need of antiretroviral therapy, approximately 4% received it.¹⁶

In late January 2003 and alongside other Central American officials, the Advisor to the Minister of Health in Honduras, Humberto Cosenza, signed an accord with five pharmaceutical manufacturers to reduce their prices by 55% (Efe News 2003_b; Deutsche Presse Agentur 2003; Munoz 2003.) According to a ministry official, the new prices would increase significantly the number of persons who could receive antiretroviral treatment. In return, the governments pledged to prevent these drugs from being diverted for sale outside of the region.

In April 2003, following criticism from Agua Buena, a nongovernmental organization based in Costa Rica, the Honduran government announced a plan to distribute 2 million condoms during the Semana Santa vacation period (Agence France Presse 2003_a). At the close of the month, the Honduran government agreed to participate in “Programa Esther”, a program initiated by Spain, France, Italy, and Luxembourg to promote technical cooperation between Latin American countries and the fight against AIDS. (Agence France Presse 2003_b)

In early summer of 2003, the First Lady of Honduras in a visit to Spain in a plea for further assistance and funding of antiretroviral treatment noted that “there is a high percentage of the population between 20 and 40 years that die of AIDS (Efe News Services 2003_c). In the months following this visit, the Honduran government revised earlier estimations, and suggested that 27,000 children will become orphans annually by 2005 (Leiva 2003). A survey taken at the same time of seventeen key stakeholders ranked the government national response at an effective rate of 59% (Rivera et al 2004). By October, U.N. experts had estimated that the average Honduran’s life expectancy had been reduced from 70 to 31 years because of the disease (Associated Press 2003). By the close of 2003, according to Honduran authorities,

¹⁶ For a complete list of antiretroviral variance for Honduras and other Latin American countries, see the Appendix Table 1.

approximately 63,000 of 6,900,000, or .91% of its citizens, were infected (UNFPA 2003). Of the PLWHA in need of antiretroviral therapy, approximately 17% received it.

By the summer of 2004, the incidence of HIV/AIDS continued to climb, especially among Honduran prostitutes of which 10% had been infected with HIV/AIDS (La Opinion 2004). A survey of the Honduran north coast indicated that stigmatization was thwarting prevention efforts (AIDS Weekly 2004.) The authors of the study indicated that “questions of power, sexuality, and affective expectations about partners complicate the situation for women” seeking to avoid HIV/AIDS infection. Following this survey in August 2004, the Honduran government officially recognized three homosexual organizations (Efe News Services 2004_a). With this recognition, the government essentially strengthened their efforts in the fight against AIDS.

In November of 2004, the Honduran Ministers of Health and Defense, signed an accord with UNAIDS to further work towards reducing the risk of HIV infection among the Honduran military (Efe News Services 2004_b). By late November, the Honduran representative to UNICEF warned that without further prevention and treatment efforts, Honduras could follow the Africa and its devastation caused by the HIV/AIDS (Agence France Presse 2004). According to Honduran authorities, approximately 66,000 of 7,100,000, or .93% were infected with the HIV/AIDS virus (UNFPA 2004). Of the PLWHA in need of antiretroviral therapy, approximately 30% received antiretroviral therapy. Of the suspected 66,000 cases, most were between the ages of 15 and 49 (Efe News Services 2004_c). The International Labor Organization estimated that 53% of those affected worked in the service area. In December 2004, UNAIDS estimated that 37,000 children in Honduras could become orphans by 2010 (Efe News Services 2004_d).

In sum, one first notes that the provision of antiretroviral therapy in Honduras changed significantly during the measured years from 4% in 2002 to 30% in 2004. Despite this increase, one observes that the state capacity index only fluctuated slightly from 9.21% to 9.32% during the period. Similarly, one also observes that the number of people living with HIV/AIDS in Honduras increased by only 6,000 from 2002 to 2004, or a change of .90% to .93%. Finally, Honduran officials' understanding of the HIV/AIDS situation shifted from "Mixed Awareness" to "Highly Aware." In other words, the political leadership moved from some inconsistency and inaccuracy in the public statements and actions, to more consistency and accuracy concerning the HIV/AIDS situation in Honduras. This shift coincided with the increase in the provision of antiretroviral therapy among those in need.

Table 3: Summary of Situation in Honduras

	2002	2003	2004
DV: Provision of Antiretroviral Therapy (ART)			
Percentage In Need Receiving ART	4%	18%	30%
H1: Control (State and Economic Capacity)			
Index	9.21%	9.21%	9.32%
H2: Electoral Accountability: Role of Stigma			
People Living With HIV/AIDS (PLWHA)	60,000	63,000	66,000
Population Size	6,700,000	6,900,000	7,100,000
Percentage of Overall Population Infected	0.90%	0.91%	0.93%
H3: Epistemic and Political Coordination			
Political Understanding	Mixed Awareness	Highly Aware	Highly Aware

b. Nicaragua

The Nicaraguan authorities recognized the first case and subsequent death of HIV/AIDS in 1987. In the years following this recognition and despite widespread poverty and overall public health ignorance among the general population, official Nicaraguan acknowledgement of HIV/AIDS as a relevant issue was limited. International organizations attempted to recognize Nicaraguan HIV/AIDS concerns, and reverse the initial negative trend. Internationally sponsored surveys taken during this period indicated that knowledge regarding HIV/AIDS prevention and treatment was particularly low in Nicaragua (Medrano et al 1993; Espinoza 1993). At the time, the Pan-American Health Organization predicted that Nicaragua could register 25,000 cases by 2000 (Agence France Presse 2000_a). Besides this epidemiological estimate, internationally supported economic models suggested that HIV/AIDS infection could cause a 60-70% decline in a worker's lifetime productivity, as well as increased health and funeral expenses (Siegel 1996).

In August of 2000, the Ministry of Health in Nicaragua asserted that there were only 378 cases of people living with HIV/AIDS (PLWHA) in Nicaragua (Agence France Presse 2000_a). This assertion came despite earlier claims by PAHO and then current claims by a non governmental organization, La Fundacion Nimehuatzin. This organization estimated that there were 40,000 unregistered cases in Nicaragua, which the Nicaraguan Health Minister, Mariangeles Arguello, deemed as simply "incorrect." By November of the same year, the Nicaraguan government had revised these figures to 550 cases of AIDS, of which 132 had died (Agence France Presse 2000_b). The director of the Fundacion Nimehuatzin, a winner of a UN Prize for the fight against AIDS, clashed with this assessment stating that "the incomprehension, discrimination, and rejection that exists among the same authorities impede knowing the real" truth and providing adequate infrastructure with the epidemic.

By May of 2001, the Nicaraguan government reported that documented cases of AIDS had increased by 166% over the preceding year (Efe News Services 2001_a). Following this slight upward revision, experts from many Central American countries, including Nicaragua, participated in the launching of negotiations to secure better access to AIDS medications (Efe News Services 2001_b). In late June, the Nicaraguan Health Minister, Mariangeles Arguello, declared that “At least for now, we have a unique window” to contain this epidemic (Efe News Services 2001_c). By then, Nicaraguan authorities had registered 688 people with the HIV/AIDS virus, of which 174 had died since the first registration in 1987. In November 2001, Nicaragua held its fourth “free and fair” elections since 1990. Enrique Bolaños of the Constitutional Liberal Party (PLC)¹⁷ was elected as president, defeating the Sandinista National Liberation Front’s (FSLN)¹⁸ candidate, Daniel Ortega. Despite initial promising polling data, Ortega could not overcome the PLC candidate who won their third consecutive presidential election (Stahler-Sholk 2003; Anderson and Dodd 2002). During Bolaños’s campaign, he distanced himself from his predecessor, Aleman, and charges of corruption within the Aleman government.

By early February of 2002, the Nicaraguan government announced a health plan that gave preference to Nicaraguans in the poorest territories (Efe News Services 2002_a). This plan sought to promote the treatment and prevention of HIV/AIDS on a national scale. By December 2002, Nicaragua had registered 957 cases of HIV/AIDS with 227 people having died from the disease (Xinhua News Agency 2002). These 957 cases represented .02% of Nicaragua’s 5,300,000 citizens. Of the Nicaraguans in need of antiretroviral therapy, none received it (UNFPA 2002).¹⁹

¹⁷ Partido Liberal Constitucionalista (PLC)

¹⁸ Frente Sandinista de Liberación Nacional (FSLN)

¹⁹ For a complete list of antiretroviral variance for Nicaragua and other Latin American countries, see the Appendix Table 1.

In late January 2003, the Nicaraguan Minister of Health, Lucio Salvo, along with other Central American Ministers of Health, signed an accord with pharmaceutical manufacturers to reduce the price of antiretroviral therapy (Efe News 2003_a; Deutsche Presse Agentur 2003; Munoz 2003.) According to a ministry official, the new prices would increase significantly the number of persons who could receive antiretroviral treatment. In return, the governments pledged to prevent these drugs from being diverted for sale outside of the region. In March of 2003, the Adjunct Secretary General of the United Nations, Thoraya Obaid, warned that the United Nations millennium goals would not be met unless “we occupy ourselves with problems of population and reproductive health” (Efe News Services 2003_b). This announcement foreshadowed an April 2003 declaration by the World Bank that warned that countries like Nicaragua were at great risk not to meet the Millennium Challenge of Education and Health (La Republica 2003).

In June 2003, the Nicaraguan president, Enrique Bolaños, noted that “we are going to guarantee...the access to medicine through the use of generics, prevention, and attention with an emphasis on diseases...like AIDS (Xinhua 2003_a).²⁰” In July 2003, a representative to the Pan-American Health Organization, Patricio Rojas, warned that if Nicaragua did not take appropriate action, they would “produce the same incidence rates as Honduras.” (Xinhua 2003_b). At the same time, the executive director of the Center for Information and Advisorial Services in Health²¹, Ana Quiroz, admitted that the Nicaraguan government would not reduce poverty by 2013 (Xinhua 2003_c). In turn, Quiroz suggested that this poverty would invariably advance health problems such as the spread of HIV/AIDS.

In August 2003, the Nicaraguan association of National Educators released a manual for sexual education that promoted sexual abstinence, the use of contraceptives, and the prevention

²⁰“Vamos a garantizar...el acceso de medicamentos con el uso de genéricos, prevención, y atención con énfasis en patologías como...VIH-SIDA.”

²¹“la directora ejecutiva del Centro de Información y Servicios de Accesoría en Salud (CISAS)

of the HIV/AIDS Virus (Xinhua 2003_d). In September 2003, the minister of Industry, Construction, and Commerce, Mario Arana, noted that the Nicaraguan government supported the position of the World Trade Organization that the poor countries deserved the ability to import cheap generic drugs (Xinhua 2003_e).

By October 2003, Nicaragua had registered 1099 cases of the HIV/AIDS virus, of which 248 had died. Of the total, 469 had acquired the disease through mother-to-child transmission (Agence France Presse 2003_a). The Medical advisor to the Ministry of Health, Oscar Jarquin, admitted that there existed a sub-registry of people infected that were unregistered. He attributed this to a lack of information in the population and the fear of social discrimination.

In the same month, at the Third Central American Congress of AIDS in Panama, regional nongovernmental organizations and activists discussed the state of rights and treatment for those infected by the HIV/AIDS virus. The vice-president of the Organizing committee praised countries such as Panama and Honduras for their treatment efforts, but called the quantity provided by Nicaragua “ridiculous” (Efe News Services 2003_c). At the same Congress, the Nicaraguan delegate Oscar Jarquin along with other Central American Ministers, signed a declaration that vowed to “reactivate our war for controlling and reversing the epidemic of HIV/AIDS” (Efe News Services 2003_e).

By the close of 2003, the Nicaraguan government recognized 1,167 of 5,500,000 Nicaraguans, or .02% of its citizens infected with the HIV/AIDS virus (UNFPA 2003). It also suggested that there existed 6 or 7 times that many that have not been acknowledged (Agence France 2003_b). About 2% of PWLHA in need of antiretroviral therapy received it. La Fundacion Xochiquetzal estimated that the quantity of infected persons was more than 40,000. According to their estimations, the Nicaraguan government must “multiply the number of registered cases by 50” in order to realize the true extent of the epidemic. A director of

epidemiology, Juan Jose Amador, paralleled this assessment, noting his fear of the existence of a sub-registry that distorts the accuracy of official government data (Xinhua 2003_f). The news of these acknowledgements was followed by the release of a U.N. study that indicated that 41% of PLWHA in Managua, the capital of Nicaragua, have little or no accurate knowledge about the HIV/AIDS disease (Efe News Services 2003_f).

In February 2004, the Nicaraguan Center for Human Rights²² cited the Nicaraguan government as the “principal violator of human rights” and noted how the lack of essential medicines affects the entire population (Xinhua 2004_a). By May of 2004, the Nicaraguan minister of Health, Jose Alvarado, blamed the slight rise in PLWHA to loose international borders and Central American cargo transports (Xinhua 2004_b). To circumvent this rise, the Minister declared that the Nicaraguan Ministry of Health was “making contacts with the ministries of Health of Honduras and Costa Rica” in order to coordinate their fight against HIV/AIDS.

In the summer of 2004, the Center for Investigation in Demography, Health, and Horizontal Programs²³, released a study suggesting that 75% of the youth in the north and central zones of Nicaragua have a high knowledge about HIV/AIDS (Xinhua News Agency 2004_c). Shortly thereafter this promising development, the director of the Procuraduria de los Derechos Humanos, Flor Ruiz, indicated that the Nicaraguan centers for Health and Hospitals did not have sufficient equipment and materials (Xinhua 2004_d). In turn, doctors and auxiliary personal were often unnecessarily exposed to diseases such as HIV/AIDS.

In the fall of 2004, the President of Nicaragua released a plan which targeted persons 18-30 on a variety of issues including the prevention of AIDS (Xinhua 2004_e). One week later, the Nicaraguan government presented their National Plan for Health for 2004-2015. Specific to the

²²“El Centro Nicaragüense de Derechos Humanos (CENIDH)

²³“La Fundación Puntos de Encuentros el Centro de Investigaciones en Demografía y Salud y el Programa Horizontes.”

HIV/AIDS situation, the plan sought to increase access and the quality of services of HIV/AIDS treatment (Efe News Services 2004_a; Xinhua News Agency 2004_f). By the close of 2004, the Nicaraguan authorities recognized 1500 HIV/AIDS cases, or approximately .03% of its population (UNFPA 2004). About 4% of the recognized PLWHA in need of antiretroviral therapy received it. UNAIDS estimated Nicaragua's HIV/AIDS prevalence at 6300 Nicaraguans (UNAIDS 2004).

In sum, one first notices that the provision of antiretroviral therapy in Nicaragua barely increased from 0% to 4% during the period. During the same period, its capacity increased due to an improvement in its health infrastructure. Also, the Nicaraguan government acknowledged an increase of 543 people living with HIV/AIDS in Nicaragua. Finally, the Nicaraguan government's understanding of the HIV/AIDS situation improved from "Not Aware" to "Mixed Awareness." Basically, the accuracy of the actions and statements of the Nicaraguan government improved, but still remained highly irregular and inaccurate in certain situations. For example, the government did not accept international estimates at the extent of the crisis and did not adequately protect its system responders.

Table 4: Summary of Situation in Nicaragua

	2002	2003	2004
DV: Provision of Antiretroviral Therapy (ART)			
Percentage In Need Receiving ART	0%	2%	4%
H1: Control (State and Economic Capacity)			
Index	9.23%	16.21%	16.43%
H2: Electoral Accountability: Role of Stigma			
People Living With HIV/AIDS (PLWHA)	957	1,167	1,500
Population Size	5,300,000	5,500,000	5,600,000
Percentage of Overall Population Infected	0.02%	0.02%	0.03%
H3: Epistemic and Political Coordination			
Political Understanding	Not Aware	Mixed Awareness	Mixed Awareness

c. Chile

Chilean health authorities reported the first case of HIV/AIDS in 1984 (Arredondo et al. 1993). By 1989 and in response to the burgeoning regional and international epidemic, the Chilean Health Ministry required an AIDS antibody test for foreigners wanting to stay in Chile for more than six months. At the time, Chile had registered 103 people with AIDS, 43 of which had died (Reuters 1988). Beginning in 1991, the Chilean National AIDS Commission (CONASIDA) launched successive campaigns designed to increase risk awareness (Child et al 1998).

By 1997, AIDS was the fifth leading cause of death among Chilean men and eleventh leading cause of death among women, aged 20 through 44 (Ortiz et al 2000). In 1998, UNAIDS launched a pilot program to provide antiretroviral therapy to 30,000 HIV-positive women in eleven pilot countries, including Chile (Capdevila 1998: 1; Brown 1997:A02). In the awarding of the antiretroviral program, UNAIDS indicated that besides infrastructure, Chile had the political will to implement the program nationally. By 1999, many these pilot countries including Chile, reported progress on their drug access initiatives (Sturchio 1999). Initial and subsequent runoff elections for president were held in December 1999 and January 2000 (Hughes and Parsons 2003; Talavera 2000). Ricardo Lagos Escobar of the Christian Democrat Party (PDC)²⁴ narrowly won the election over Joaquin Lavin of the Alliance for Chile party (APC)²⁵. His victory marked the third consecutive victory for the Concertacion coalition and the election of a different party's candidate within that coalition.

Despite this initial momentum, Chile had not completely curtailed the HIV/AIDS situation in its treatment and prevention programs. For example, in November 2000, while the HIV/AIDS experts praised the Brazilian government's treatment model and their relationships

²⁴ Partido Demócrata Cristiano (PDC)

²⁵ Alianza pro Chile (APC)

with the AIDS community and Catholic Church, the Chilean prevention and treatment model was criticized (Efe News 2000). An envoy likened the word “condom” in Chile to a profanity. Similarly at an international HIV/AIDS conference, the Chilean government officially recognized the enormous economic impact upon its work force and corporations (Agence France 2001_a). At the same conference, the Chilean delegation admitted that although “Chile has not made a major answer” to the AIDS situation, it still possessed many new ideas and advanced strategies to combat the HIV/AIDS crisis (Efe News Services 2001_a). These new ideas and strategies included the importance of maintaining sustained conversations with Brazil in order to study and potentially implement similar programs.

By August of 2001, CONASIDA reported 8,000 cases of AIDS in Chile, with estimates of 30,000 more with the HIV/AIDS virus (Pribble 2001_a). In September, the Chilean Ministry of Health estimated approximately 5000 Chileans will die annually of AIDS by 2005 (Pribble 2001_b). Furthermore, it believed AIDS would be the leading cause of death in Chile by 2010. In October 2001, the Chilean Supreme Court overturned an appellate court ruling that the Ministry of Health was obligated to provide antiretroviral therapy to three AIDS patients (Agence France Presse 2001_b). The following day, the Chilean police detained ten AIDS patients involved in a protest in front of the Chilean Supreme Court in Santiago (Agence France Presse 2001_c). Their protest originated around the lack of government provision of free antiretroviral therapy. Representing the detained individuals, Vivo Positivo, a non governmental AIDS group, suggested that “It is a fault against the right to life” to not provide this therapy.

By December 2001, the Chilean president Ricardo Lagos proposed a law that established prevention programs and prohibited discrimination against HIV/AIDS patients (Agence France Presse 2001_c; Efe News Services 2001_b; Leal 2001). Besides this law, the president announced that the Ministry of Health would completely finance treatment of 3,100 PLWHA, including 140

children and about 100 pregnant women.²⁶ According to estimates, this treatment regimen would cover approximately 90 percent of those in need of the therapy. Furthermore, the Minister of Health, Michelle Bachelet, indicated that the government had begun conversations with pharmaceutical laboratories in order to reduce the pharmaceutical cost by 25%. At the time, the ministry announced that the Chilean state should both educate the population of their rights and their work, and should promote scientific research into the infection.

By June 2002, the Chilean government further sought to provide access to catastrophic diseases under its Universal Access to Explicit Guarantees Plan proposal (AUGE²⁷) (Agence France Presse 2002_a). For example, Health Minister Osvaldo Artaza announced that 84 percent of HIV/AIDS patients receive free anti-retroviral therapy cocktails (Gonzlez 2002_a). Artaza continued, noting that under the AUGE plan, “we (the Chilean government) hope that 100 percent of patients will have access to prevention and to anti-retroviral drugs.” To finance this plan, the Government proposed new taxes on alcoholic beverages, tobacco, gasoline, and lottery tickets.

By summer of 2002, with support from the enforcement of the past years' anti-discrimination law, the status of discrimination investigations and women's reproductive rights with respect to HIV/AIDS continued to evolve (Gonzlez 2002_b). For example, two Chilean workers successfully brought litigation against their employers for discrimination based upon their HIV status (Efe News Services 2002_a). CONASIDA for its part continued its focus on preventing mother-to-child transmission through antiretroviral treatment, and gave reproductive therapy to the affected women.

In the fall of 2002, the Chilean government installed 2000 condom dispensers in universities, bars, discothèques, and movie theaters in further efforts to prevent HIV/AIDS (Efe

²⁶ At the time, approximately 80% of Chileans received antiretroviral treatment.

²⁷ Acceso Universal a Garantías Explícitas

News Services 2002_b). This proactive step would later be criticized by the Catholic Church in Colombia. Following this prevention campaign, the Chilean government agreed to further negotiate for cheaper antiretroviral therapy along with other Andean countries (Efe News Services 2002_c). At the close of 2002, to mark World AIDS Day the Chilean government called for an end to global discrimination of PLWHA (Xinhua 2002). It also estimated its HIV/AIDS population at 30,000 or .19% of its 15,600,000 citizens (UNFPA 2002). Of the PLWHA in need of antiretroviral therapy, approximately 91% received it.²⁸

In June 2003, the Chilean Government signed a pact with the United Nations Global Fund (Deutsche Presse-Agentur 2003). With this pact, the Global Fund agreed to donate \$38 million for five years, and the Chilean government agreed to purchase antiretroviral treatment for its citizens living with HIV/AIDS. At the ceremony, Chilean president Ricardo Lagos announced that the funds would cover total treatment costs, as well as prevention efforts. Also in June, the Chilean government along with its Andean neighbors successfully negotiated with the seven manufactures of generic antiretrovirals, and one manufacturer of brand name drugs for further price reductions in the antiretroviral treatment regimen (AIDS Weekly 2003). This agreement fulfilled Chile's 2002 pledge and saved the region as a whole approximately \$120 million a year, or about 150,000 annual antiretroviral treatments.

In late October 2003, the Chilean government expressed its concern over several television channels refusal to air upcoming government-sponsored prevention commercials (Xinhua News 2003_a). These commercials angered certain conservative television channels for their promotion of condom use to prevent diseases like HIV/AIDS. By December 2003, conservative groups and the Catholic Church in Chile were openly criticizing the condom promotion campaigns. For instance, the Catholic Church indicated that the campaigns “generate

²⁸ For a complete list of antiretroviral variance for Chile and other Latin American countries, see the Appendix Table 1.

a false sense of security” (Agence France Presse 2003; Xinhua News Agency 2003_b). Despite these criticisms, the Chilean government voted to “neither quit, nor change” the campaign and instead questioned the validity of their opponents efforts (Xinhua News Agency 2003_c). In their defense, the Chilean government cited scientific studies that demonstrated that condoms have an effectiveness of 95%, and rejected the Chilean Catholic Church's assertion that there effectiveness is only 80% (Xinhua News Agency 2003_d). Finally, it revised downward its HIV/AIDS estimates to 26,000 of 15,800,000 Chileans (.16%)(UNAIDS 2004; UNFPA 2003). 100% of the PLWHA in need of antiretroviral therapy received it.

In May of 2004, Chilean officials met with other Mercosur neighbors to discuss HIV/AIDS (Agence France Presse 2004). In the same month, a nongovernmental organization released a study that showed the unauthorized sterilization of 12 women infected with the HIV/AIDS virus (UPI Chile 2004_a). Upon this release, Chilean officials immediately pledged an investigation and denounced the forced sterilization. By late June of 2004, further criticism of the Chilean government had emerged. At the time, the NGO Vivo Positivo accused the state agency, CONASIDA, of negligence in its provision of antiretroviral therapy for the current quarter (Xinhua News Agency 2004_a). According to Vivo Positivo, hospitals gave certain patients a prescription that lasted only three days after which they needed to return to the hospital to refill the prescription. The Chilean Minister of Health immediately admitted this deficit and pledged to investigate the situation internally. (UPI Chile 2004_b).

One year after the Global Fund Initiative in October 2004, the Chilean Minister of Health stressed the importance and responsibility of Chilean citizens to take adequate prevention methods before they become infected with HIV/AIDS (UPI Chile 2004_c). In evaluating the program, the Global Fund representative, Aleph Henestrosa, praised Chile's efforts, suggesting that it “has all of the elements needed to win the fight against AIDS” (Estrada 2004). Henestrosa

continued that “the government, civil society, and people with HIV/AIDS are working side by side extremely well. In addition, President Ricardo Lagos is fully committed to this issue.”

By December 2004, United Nations reports estimated that the number of PLWHA in Chile had risen to 50,000 of 16,000,000 Chileans (.31%) (UPI Chile 2004_d; UNFPA 2004). Of the PLWHA in need of antiretroviral therapy, 100% received it. The number of women infected continued to climb so that 1 of every 7 PLWHA was a woman, dramatically up from 1 in 30 in 1990 (UPI Chile 2004_e). Forty one percent of the women infected were the head of their respective household (UPI Chile 2004_f). Concurrent with the release of these statistics, the National Service for Women and the Ministry of Health signed a cooperation accord to reverse this trend and further protect the affected population.

In sum, the Chilean government increased its antiretroviral therapy coverage from 91% to 100% by 2003. During the period, its capacity index fluctuated slightly dropping from 19.37% to 18.85%, before it rebounded to 19.13%. According to the Chilean government and UNAIDS, the number of PLWHA first declined by 4,000, and then soared to 50,000, or .31% of the Chilean population. Finally, during the measured period of 2002-2004, the Chilean government remained consistent in the accuracy of its political statements and actions with respect to the HIV/AIDS situation in Chile.

Table 5: Summary of Situation in Chile

	2002	2003	2004
DV: Provision of Antiretroviral Therapy (ART)			
Percentage In Need Receiving ART	91%	100%	100%
H1: Control (State and Economic Capacity)			
Index	19.37%	18.85%	19.13%
H2: Electoral Accountability: Role of Stigma			
People Living With HIV/AIDS (PLWHA)	30,000	26,000	50,000
Population Size	15,600,000	15,800,000	16,000,000
Percentage of Overall Population Infected	0.19%	0.16%	0.31%
H3: Epistemic and Political Coordination			
Political Understanding	Highly Aware	Highly Aware	Highly Aware

d. Colombia

The first reported case of AIDS in Colombia occurred in 1984 (Boshell et. Al 1989). The following year, the Colombian government introduced its National HIV/AIDS Control Program, a program that later suffered widespread criticism for its ineffectiveness (Cespedes et al 1998_a). By December of 1987, the Colombia Ministry of Health had documented 178 cases of AIDS. By July of 1995, Colombia had the third most AIDS cases in Latin American countries (Garcia et.al 1996). Internal organizations estimated that between 47,000 and 138,000 Colombians could be living with HIV/AIDS (Cespedes et al 1998_b). With these staggering statistics in mind, several nongovernmental and community organizations successfully lobbied that antiretroviral therapy be added to the Colombian Social Security system (Ardila 1998). Unfortunately when the social security system failed to administer antiretroviral therapy, PLWHA in Colombia began litigation in the legal system in order to receive access (Perfetti 1998).

By late 2000, the Colombian Ministry of Health had detected 22,500 cases of HIV/AIDS in Colombia (Agence France Presse 2000_a). Medical experts criticized these statistics as misleading and too low, citing in part the existence of HIV/AIDS in zones of Colombia not controlled by the government. Shortly after this announcement, the Ministry of Health estimated that there existed some uncertainty with regards to official HIV/AIDS estimates (Agence France Presse 2000_b). Overall, the population between 20 and 44 years represented 80 percent of the cases. With these alarming statistics, the Colombian government announced that it would invest \$45 million dollars in prevention programs.

Despite this initial effort, the number of PLWHA in Colombia continued to climb among its vulnerable population (Agence France Presse 2001_a). For example, the proportion of women with HIV/AIDS had increased from 1 in 47 in 1997, to 1 in 7 in 2001 (Efe News Services 2001_a). In October 2001, while the Ministers of the Colombian government attended a World Trade

Organization meeting discussing themes such as intellectual property and HIV/AIDS pharmaceuticals, the guerillas FARC ordered HIV/AIDS testing of 4,000 residents in a neutral zone in the South of Colombia (Efe News Services 2001_b; Efe News Services 2001_c; Agence France Presse 2001_b)²⁹. At the close of 2001, Colombia still reported only 23, 447 official cases of HIV/AIDS (Agence France Presse 2001_c).

In May 2002, Alvaro Uribe, a liberal independent heading the coalition Primero Colombia, won the presidential election beating the two major parties (Ulloa 2002; WOLA 2002). During an international AIDS conference in July 2002, UNAIDS officials suggested that without an “effective response”, the HIV/AIDS epidemic in Latin America, especially in Colombia, will continue to increase to dangerous levels (Efe News Services 2002_a). During the same conference, Latin American nongovernmental organizations, including those from Colombia, protested outside of pharmaceutical factories and the conference location because of the lack of antiretroviral therapy for PLWHA (Efe News Services 2002_b). Later in the same month, Colombian organizations protested and criticized the FARC and the “ultraright's” intimidation of PWLHA in Colombia (Deutsche Presse Agentur 2002).

By August 2002, according to the Colombian Anti-AIDS League (LCLLS), health litigation for access to antiretroviral therapy for PLWHA had increased by more than 400 percent since 2000 (Garca 2002:1). Besides these access claims, the litigants sought access to all antiretroviral medications possible used in HIV/AIDS treatment. At the time, the Colombian government only covered seven of the fourteen drugs normally prescribed. Of these seven omissions, two were often prescribed as part of the most effective regimen.

In September 2002, a meeting of seventy HIV/AIDS experts concluded that 450,000 Colombians could be infected with the HIV/AIDS virus (Efe News Services 2002_c). These

²⁹Fuerzas Revolucionarias de Colombia

experts criticized the official government statistics for ignoring specific regions and years, calling the HIV/AIDS situation “very grave...and one that needs an effective response before it is too late.”

In early November 2002 at a World Trade Organization meeting, several countries including Colombia declared their wish to have “a contact between developed nations and developing nations to acquire medicine” for diseases such as AIDS, malaria, and tuberculosis (Agence France Presse 2002_a). At the same time, the Colombian government participated in a technical FTAA conference in Honduras to discuss proposals to improve access to essential medicines in Latin America (Agence France Presse 2002_b). These experts concluded that the FTAA agreement would increase barriers to this access to essential medicines. Shortly after this conference, the Colombian Ministry of Health announced sanctions on several pharmaceutical companies for their poor quality and excessive prices on antiretroviral therapy pharmaceuticals (Efe News Services 2002_d).

In late November, the Andean Ministers of Health conducted meetings in Lima, Peru to discuss common area policies, including how to improve access to antiretroviral therapy (Efe News Services 2002_e). According to preceding announcements, the Ministries (including Colombia) “will present mechanisms to successfully lower the cost of antiretroviral therapy” in order that the population of the Andean Community has access to this therapy in their fight against HIV/AIDS (Agence France Presse 2002_c). These mechanisms included negotiating together to reduce the prices of the antiretroviral therapy (Efe News Services 2002_e). The Colombian representative justified this commission as “individually nobody has the capacity to act upon the (antiretroviral) market.” Following this conference, the Brazilian government announced that it had signed accords with three countries, including Colombia, on sharing its accumulated knowledge on the treatment of PLWHA (Efe News Services 2002_f; Xinhua News

Agency 2002_b). By the close of the year, the Colombian official statistics reported 23, 685 PLWHA of its population of 43,500,000 (.05%) (UNFPA 2002). Of the PLWHA in need of antiretroviral therapy, 35% received it.³⁰ Unofficial epistemic estimates were approximately 140,000 and 170,000 PLWHA in Colombia (Xinhua News Agency 2002_a).

In the summer of 2003, the Colombian government participated with its Latin American neighbors in negotiations to reduce the cost of antiretroviral therapy for generic and brand name pharmaceuticals (AIDS Weekly 2003). This agreement saved the region as a whole approximately \$120 million a year, or about 150,000 annual antiretroviral treatments. Besides these negotiations, the Colombian government announced that it waited for pledged HIV/AIDS assistance from the United States (Efe News Services 2003_a). This assistance had been delayed due to the defeat of an HIV/AIDS prevention amendment in the U.S. House of Representatives.

In October 2003, the Colombian Catholic Church began to voice its concerns over the fight against HIV/AIDS in Colombia (Agence France Presse 2003_a). The Church likened the use of a condom to one playing Russian roulette, and declared that studies have demonstrated that condoms fail between 15 and 20 % of the time. Immediately following the Colombian cardinal's declaration, the Brazilian Minister of Health, Humberto Costa, likened his comments as "without scientific merit" and affecting the work of prevention of HIV/AIDS (Agence France Presse 2003_b). Following this declaration, the governments of Colombia and Brazil signed another accord to work together in the fight against HIV/AIDS in their respective countries (Agence France Presse 2003_c). Their cooperation would include targeting acquisition of antiretroviral therapy and preventing the spread of HIV/AIDS across their shared border.

In November of 2003, the Colombian government announced that it would donate 70 million condoms in the capital of Colombia (Efe News Services 2003_b). The campaign "Siempre

³⁰ For a complete list of antiretroviral variance for Colombia and other Latin American countries, see the Appendix Table 1.

condom” targeted colleges, universities, and nightlife locales. Following this announcement, another dire warning came, this time from the Social Protection Ministry at a seminar held in Colombia (Efe News Services 2003_c). This warning suggested that if further prevention and treatment efforts are not implemented, approximately 800,000 Colombians may become infected by 2010. At the time, the official number of PLWHA was 40, 073 of 44,200,000 Colombians (.09%) Unofficial U.N. estimates located this figure at nearly 225,000. Of the PLWHA, approximately 70% were between the ages of 15 and 35. A representative of the seminar noted the difficulty reaching Catholics, because of their rejection of the condom.

In December 2003, the director of Public Health at the Social Protection Ministry admitted that the government used only 8 of 17 existing medications to control the disease (Agence France Presse 2003_d). The director also admitted that only 9000 Colombians receive antiretroviral therapy. Following these admissions, UNAIDS launched an aggressive campaign in Colombia, promoting the use of condoms to reduce the spread of HIV/AIDS (Agence France Presse 2003_e). This campaign targeted the high risk population, and asserted its effectiveness. At the close of 2003, apprehension was spreading that CAFTA and its protection of intellectual property may impede the access of less developed countries acquisition of essential medicines, like antiretroviral therapy (Noticias Finacieras 2003).

In January 2004, the Colombian Cardinal Alfonso Lopez Trujillo again declared the inadequacy of condoms in the prevention of HIV/AIDS (Agence France Presse 2004_a). The cardinal asserted that Colombian government statements and condom policy “induces promiscuity”, especially when “youth have the hope that there is safe (risk-free) sex.” By April 2004, the Global Fund had approved a program whose objective is to reduce the vulnerability of 600,000 Colombian youth (Xinhua News Agency 2004_a). This program would be coordinated

among various branches of Colombian government and with international agencies, such as the United Nations.

In May 2004, the Colombian government promised to defend the access to generic antiretroviral medicines for the Colombian population during trade negotiations (Xinhua News Agency 2004_b). The Colombian Minister of Commerce, Jorge Humberto Botero, insisted that the importance of intellectual property would not diminish the interest of the Colombian public health.

In August 2004, the Colombian government pledged \$200 million for a HIV/AIDS prevention program (ANSA Noticiero 2004). The funding from this program came from international sources. In late November 2004 and before the International Day of HIV/AIDS, the Colombian Minister of Social Protection reported that there were 40,000 of 42,500,000 Colombians (.09%) infected with HIV/AIDS in Colombia (Xinhua News Agency 2004_c; Agence France Presse 2004_b). Forty percent of the PLWHA in need of antiretroviral therapy received it. The Colombian government further estimated that 180,000 Colombians could be infected with HIV/AIDS. Following this news, the Colombian president, Alvaro Uribe, pleaded with his people to continue to work together to prevent this “menace against life and the well being” of the Colombian people (Efe News Services 2004).

In sum, the Colombian government increased its antiretroviral coverage from 35% in 2002 to 47% by the close of 2004. At the same time, its state capacity index improved slightly from 16.15% to 16.35%. Unfortunately, the acknowledged number of PLWHA in Colombia also increased dramatically from 23, 685 to 40,000. Finally, throughout the period its government policy and statements remained mixed, with positive efforts and statements intertwined with inaccurate and ineffective policies. For example, while the Colombian government pledged HIV/AIDS funding and increased prevention programs, it also significantly underestimated the

extent of the HIV/AIDS situation and did not recognize the value of certain antiretroviral therapies.

Table 6: Summary of Situation in Colombia

	2002	2003	2004
DV: Provision of Antiretroviral Therapy (ART)			
Percentage In Need Receiving ART	35%		47%
H1: Control (State and Economic Capacity)			
Index	16.15%	16.17%	16.35%
H2: Electoral Accountability: Role of Stigma			
People Living With HIV/AIDS (PLWHA)	23,685	40,073	40,000
Population Size	43,500,000	44,200,000	42,500,000
Percentage of Overall Population Infected	0.05%	0.09%	0.09%
H3: Epistemic and Political Coordination			
Political Understanding	Mixed Awareness	Mixed Awareness	Mixed Awareness

7. ANALYSES

Based upon the literature review and the subsequent data, this analysis will explore the merits and relevancy of each derived hypothesis. First, the control hypothesis, state capacity and economic limitations, essentially advanced the notion that the variation in the provision of pharmaceuticals could be attributed to macroeconomic forces. With this hypothesis one would assume that low capacity states would only react marginally, while medium capacity states would react more significantly in the provision of antiretroviral therapy. As one notes from the capacity index, this hypothesis explains some variation in the divergence between low and medium capacity states in Latin America. For instance, no low capacity states have successfully provided universal antiretroviral coverage and all medium capacity states have implemented more than marginal antiretroviral coverage.

While the hypothesis could explain this variance, it does not explain the substantial divergence between the pairs of low capacity states (represented in Honduras and Nicaragua), nor the divergence between the pairs of medium capacity states (represented in Chile and Colombia). For example, Nicaragua's capacity index exceeded Honduras's marginally, while its provision of antiretroviral therapy significantly fell behind Honduras's, especially in the later years of the research. One can see similar results with the comparison pair of Chile and Colombia. Ultimately, these divergences have allowed the researcher to control for the first hypothesis and search for explanations with fuller explanatory value.

The second hypothesis, electoral accountability and the role of stigma, advanced the notion that governments derive their legitimacy through political participation, such as voting, from the electorate. In return, the political leadership promotes policies beneficial to their constituency. Stigmatized populations, such as those infected by the HIV/AIDS virus, have struggled in gaining suitable electoral momentum to change the political leadership and their

policies. However as the HIV/AIDS population grows, the necessity of securing the electoral support will require that the elected advance favorable policies, such as the provision of antiretroviral therapy.

In the measured cases, this hypothesis has some explanatory power when measuring spatially, but little when measuring temporally. First Honduras's percentage of HIV/AIDS population increased from .90% to .91% to .93%, while Nicaragua's percentage of acknowledged HIV/AIDS population increases only slightly from .02% to .03%. Similarly, Chile's percentage of HIV/AIDS population ranges from .19% to .16% to .31%, while Colombia's percentage of HIV/AIDS population ranges from .05% to .09%. In both cases when measuring spatially, the country with the larger acknowledged HIV/AIDS population were more likely to implement antiretroviral therapy.

However when comparing all four countries to each other, one notices that Honduras's substantial HIV/AIDS prevalence does not automatically produce the leading government response. Instead this response was implemented by Chile. In other words, states with the largest percentage of HIV/AIDS patients will not react with the same level of government provision of essential pharmaceuticals. Secondly, this hypothesis does not hold true when measuring temporally, or across time (2002-2004). For example, Honduras's percentage of HIV/AIDS populations remains the same while its provision of antiretroviral therapy increases substantially through the measured years. Essentially, the decline in HIV/AIDS related mortality and the newly infected HIV/AIDS patients have temporarily negated the improvement in this ratio. Moreover, Chile's percentage of HIV/AIDS population bounces around while the percentage of antiretroviral therapy remains constant. These differences imply that demographic elements alone cannot explain the variance in the level of antiretroviral provision.

The final hypothesis, level of coordination between the epistemic community and the political leadership, yields more promising results in explaining the level of antiretroviral therapy. Basically, this hypothesis suggests that certain political leaders and their associated governments fail to recognize the complexity of HIV/AIDS and antiretroviral therapy. These governments, in turn, fail to undertake appropriate responses to curb the epidemic. After an examination of this hypothesis and a review of the evidence, one notes several primary trends in the level of political understanding and in turn the provision of antiretroviral therapy.

First among the comparison countries, there exists various levels of understanding and acknowledgement as to the extent of the HIV/AIDS crisis in their respective country. This crisis recognition factor varies both temporally and spatially. First, the Honduran government recognized only a fraction of the estimated HIV/AIDS cases in the early stages of the epidemic. Soon, however it reversed itself, and identified a much larger, and closer to international epistemic consensus, HIV/AIDS community.³¹ This acknowledgement parallels with its admission of the equally damaging effects of HIV/AIDS, poverty, and terrorism. Overall, this recognition differed from Nicaragua's own admission as to the extent of the crisis. Despite conditions such as extreme poverty, and the general public's low prevention knowledge of HIV/AIDS, Nicaragua continued its original claim of extremely low prevalence rates. This denial differed from estimates and scientific modeling of both international health organizations and national nongovernmental organizations. Nicaraguan authorities admitted this discrepancy eventually, but failed to address it. Instead the Nicaraguan authorities blamed an increase in HIV/AIDS upon international borders and traffic.

On the other hand, one notes similar recognition patterns within the higher capacity countries of Chile and Colombia. By late 2001, the Chilean Health Ministry recognized large

³¹ See conclusions for further discussion on this reversal and the role of change in elected governments with respect to the HIV/AIDS situation.

social and economic toll that HIV/AIDS would soon play, and immediately initiated comprehensive countermeasures of antiretroviral therapy. Its estimates corresponded to scientific consensus at the time. Like Chile, HIV/AIDS threatened the social and economic stability of Colombia and the Colombian government initiated an antiretroviral campaign. However unlike Chile, the Colombian government acknowledged the detection of substantially fewer PLWHA than international scientific estimates suggested. It too admitted this discrepancy in late 2004.

The second trend focuses on their understanding and implementation of both HIV/AIDS prevention and treatment options. First in the late 1990s, Honduran authorities bowed to pressure from conservative entities, such as the Honduran Catholic Church, and began to promote faithfulness and abstinence instead of condoms in their HIV/AIDS prevention efforts. This promotion disagreed with scientific sentiment as to the benefits of condom use, and was eventually reversed in favor of more access to condom use in late 2002. When the issue arose again in 2003, Honduran authorities rebuffed the efforts intent upon diminishing the condom use.

During this period Honduras acknowledged the benefits of antiretroviral therapy, but did not allocate ample funding for their implementation. However beginning in 2001, Honduras allocated funding in the national budget towards the purchase of antiretroviral therapy. In 2002, the country announced the construction of a regional research site. In 2003, they followed this announcement with the implementation of two major national HIV/AIDS strategies. In 2004, Honduran representatives admitted the risk of Honduras following the epidemiological trend of Africa.

Like Honduras, Nicaragua acknowledged publicly the potential benefits of antiretroviral therapy (2003) and proposed their adoption. For instance, the president guaranteed the access to generic medicine that included HIV/AIDS antiretroviral therapy. The Commerce minister voiced similar concerns, this time taking a normative bent and indicating the right of poor

countries to import cheaper generic pharmaceuticals. Despite these affirmations, importation of generic pharmaceuticals did not occur and antiretroviral therapy use in Nicaragua remained virtually nonexistent as the Nicaraguan government continued to mistake the extent of the HIV/AIDS crisis. Dire warnings by organizations such as the United Nations and Pan-American Health Organization were ignored. When Nicaraguan authorities began to make genuine contacts with other Central American ministries, it also continued to inaccurately blame external circumstances such as the porous nature of international borders and an increase in Central American trade. Finally, in late 2004, Nicaraguan officials revealed two major national health plans designed to prevent and treat HIV/AIDS.

In Chile, in terms of prevention, condom use in Chile was limited until late 2000. Like Honduras, the Chilean government modified this policy and offered wide spread access to condoms in their HIV/AIDS prevention efforts. This modification came shortly after the election of the Socialist leader, Ricardo Lagos. Furthermore, the Chilean government did not later bow to the conservative pressure in late 2003 when conservative groups attempted to disrupt government sponsored prevention commercials, characterizing condoms as generating “a false sense of security.” Instead the government defended its actions through scientific evidence and rejected the Catholic Church’s anecdotal evidence.

In terms of treatment, the Chilean government enacted legislation that prohibited discrimination of HIV/AIDS patients. It established universal access to antiretroviral therapy in the early stages of the crisis, and without excessive delay. It also negotiated the reduction of prices for antiretroviral treatment. Finally, when missteps occurred, as was seen in the sterilization case and the negligent antiretroviral prescriptions, the Chilean government immediately investigated and addressed the claims

Finally, conservative pressure also ballooned in Colombia during the same period. Like Chile and Honduras, the government rejected the Catholic Church's inflammatory statements. Instead with the assistance of Brazil, the Colombian government launched distribution and education programs to promote further condom use. Later, it announced it would donate 70 million condoms to high risk zones, such as colleges and universities.

Like Nicaragua, Colombia guaranteed the right of PLWHA to antiretroviral therapy, but like Nicaragua did not deliver this medication. It mistakenly justified this omission by stating "individually nobody (no single country) has the capacity to act upon the (antiretroviral) market," when other countries such as Brazil, Chile and India were influencing antiretroviral markets. Essentially, Colombia implied that costs delayed their procurement, and that no individual state can act uniquely. Ultimately, this absence of provision forced the infected Colombians to sue for the medication under the Colombia legal system. Lastly, Colombia recognized first the utility of only seven of fourteen, and later only 8 of 17 internationally accepted antiretroviral pharmaceuticals. The Colombian government admitted this omission later in 2003, but did not rectify the omission.

As these brief reviews have demonstrated, there exists a variance of knowledge and political will among the political leadership of the four case countries. First, recognition of the HIV/AIDS crisis in the respective countries varied significantly. The spectrum ranged from Nicaragua in absolute denial to Chile in absolute command. Secondly, all countries initially implemented ill conceived policies in their treatment and prevention of HIV/AIDS. However, the means and methods to rectify these ill conceived policies varied by case country and level of understanding. For instance, Nicaragua continued to deny the accuracy of international epidemiological estimates for its country, while Honduras had accepted these statistics. In terms of the science surrounding antiretroviral data, Colombia rejected the use of nine antiretroviral

therapy combinations, while Chile worked steadfastly towards further procurement and access to its infected population. Ultimately, besides the distribution of condoms, the political leadership demonstrating less understanding provided less antiretroviral therapy for its infected population.

8. CONCLUSIONS

While HIV/AIDS damages the strength of national economies, fosters civil unrest, and diminishes the security of nations, state response to this epidemic has varied significantly. Naturally, state capacity and economic capability has affected the ability of the state to treat this epidemic. However as the comparison of the case countries has suggested, domestic resource constraints explain only part of the antiretroviral treatment puzzle. Instead one must recognize how aspects such as the electoral accountability and the role of stigma, as well as the degree of political understanding of the science of HIV/AIDS affect the treatment of people living with HIV/AIDS.

In this research, the demographic element of the HIV/AIDS crisis and its electoral accountability explained a portion in the variance in HIV/AIDS treatment. For instance, countries with low official numbers of people infected with the HIV/AIDS virus were less likely to respond to the disease. However, the validity of this hypothesis weakens when one considers the dispute over the extent of the Nicaraguan HIV/AIDS crisis among Nicaraguan officials and the international community. Essentially, the expected confirmation of tremendous numbers of unaccounted for people living with HIV/AIDS points research further into the alternate explanation of the level of political understanding.

In the case of HIV/AIDS, one notices noteworthy differences among the political understanding of the targeted Latin American countries. In turn, this understanding and misunderstanding has coincided in part with the degree of treatment of HIV/AIDS patients. In addition, this research also suggests further exploration and research into the capacity of local and international NGOs, the role of religion (e.g. the Catholic Church), role of dependency (ideologically and/or trade-related) of state to dominant powers (i.e. the case of Colombia and

the U.S.), and the impact of a change in political leadership and ideology of the administration as potential avenues to affect the HIV/AIDS situation.

For example, a question raised may be: how might a change in the national government and/or its ideologies affect HIV/AIDS policies in areas such as antiretroviral provision? In terms of the case studies, a reversal in antiretroviral provision occurred after the election in Honduras of Ricardo Maduro Joest of the National Party (NP) and the defeat of the Liberal Party (PLH) in 2001. While the other countries conducted elections during this period, these elections did not result in a transfer of power from one governing party/coalition to another. Instead, the new president assumed the presidency as part of the previous governing coalition. While this holds true with the election of Enrique Bolaños Geyer, one notes that Bolaños significantly distanced himself from charges of corruption within the Aleman government and appealed to a wide variety of voters. Moreover, his government charged Aleman with corruption during his subsequent presidency. Unfortunately, the Bolaños's government did not bring forth change in Nicaragua's HIV/AIDS policies, but merely persisted with the status quo. Similarly, the election of Alvaro Uribe Vélez did not coincide with noticeable reforms with respect to Colombia's HIV/AIDS situation. Finally, with the election of Ricardo Lagos in 2000 came improvements in Chile's HIV/AIDS policies and actions. The current case evidence suggests further research is necessary. Other questions that might rise include: How and why do religious authorities impact the delivery and acceptance of technology like antiretroviral therapy? What internal and external factors cause this change?

Besides the implication of this information specific to HIV/AIDS, this research has further consequences for other public health crises, such as increase in incidences of avian bird flu and tuberculosis, as well as the implementation of national policies, such as the recognition of energy deficits and the presence of global warming. In these situations, one would not only

expect a variance in state capacity but also in political understanding among states, and subsequently a variance in the implementation of policy. This variance has potentially devastating consequences when one considers the global integration and effect of these issues. For example, failing to understand scientific evidence as to the causes and consequences of global warming may lead a country to adopt inadequate pollution standards. Consequentially, this knowledge deficit will degrade not only the domestic environment, but that of its neighbors.

With respect to the broader debate in comparative political economy, this research strengthens the notion that capacity alone does not satisfactorily explain state response. In other words, an increase in financial resources or capacity may not increase devotion to a problem. Instead, capacity must be combined with a greater coordination between the scientific community and the political leadership of a country. A greater understanding would enable more effective responses to the crisis from the political leadership. This research also highlights deficiencies in our current understanding of the transmission of this epistemic knowledge. For example, if the international community recognizes these knowledge deficits exist, why could they not impress upon the domestic leadership the importance of an improved understanding? Basically, recognizing the problem does not solve it. Successful links between science and politics must be either strengthened or formed. Finally, this research focuses on a region in the world outside of the normal debate. Typically, Africa and Southeast Asia's extreme and epidemic conditions receive most of the attention. However, this research has shown both the growing concern in Latin America and the possibility to address this concern before the emergence of similar conditions.

Essentially, while states struggle to dramatically improve their state capacity, there exists an opportunity for political science, the scientific and epistemic community to enhance understanding within these states. This enhancement in turn would affect decisions made and the

consequences of those decisions. Naturally, one would expect an improvement in the quality and long-term viability of these decisions. Ultimately, this degree of political understanding has global implications and efforts must be undertaken to strengthen epistemic and political coordination so that appropriate policies may be implemented.

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10. APPENDICES

Appendix A: Percentage of Antiretroviral Therapy Provision

	2002	2003	2004
Argentina	100	100	90
Bolivia	6		19
Brazil		100	86
Chile	91	100	100
Colombia	35		47
Ecuador	65		34
El Salvador		30	32
Guatemala		23	30
Honduras	4	18	30
Mexico		100	74
Nicaragua	0	2	4
Peru	15		18
Uruguay		90	100

Appendix B: Composite H1 Index (2002-2004)

Country	2002	2003	2004	Average
Argentina	37.46%	37.96%	38.82%	38.08%
Bolivia	8.48%	8.47%	8.56%	8.51%
Brazil	25.02%	24.92%	25.26%	25.07%
Chile	19.37%	18.85%	19.13%	19.12%
Colombia	16.15%	16.17%	16.35%	16.22%
Ecuador	15.82%	15.81%	16.05%	15.89%
El Salvador	15.97%	15.92%	16.03%	15.97%
Guatemala	11.10%	11.06%	11.13%	11.10%
High income	100.00%	100.00%	100.00%	100.00%
Honduras	9.21%	9.21%	9.32%	9.25%
Mexico	24.84%	24.71%	26.87%	25.47%
Nicaragua	9.23%	16.21%	16.43%	13.96%
Peru	14.01%	14.03%	14.21%	14.08%
Uruguay	42.90%	42.89%	43.97%	43.25%

Appendix C: Determination of Ordered Pairs

